

selected from the group consisting of SEQ ID NO: 103 through SEQ ID NO: 154 [SEQ ID NO: 155 through SEQ ID NO: 206].

5. (Amended) A purified and isolated protein having an amino acid sequence selected from the group consisting of [SEQ ID NO: 52 through SEQ ID NO: 102 and] SEQ ID NO: 155 through SEQ ID NO: 206.

6. (Amended) A method for the recombinant DNA-directed synthesis of a protein , said method comprising:

a1
cont.

culturing a transformed or transfected host organism containing a DNA sequence capable of directing the host organism to produce said protein under conditions such that the protein is produced, said protein exhibiting substantial homology-to a protein comprising the amino acid sequence selected from the group consisting of [SEQ ID NO: 52 through SEQ ID NO: 102 or] SEQ ID NO: 155 through SEQ ID NO: 206.

a2

9. (Amended) A recombinant expression vector comprising a DNA sequence selected from the group consisting of [SEQ ID NO:1 through SEQ ID NO: 51 and] SEQ ID NO: 103 through SEQ ID NO: 154.

a3

17. (Amended) A composition comprising an expression vector capable of directing host organism synthesis of a protein having an amino acid sequence selected from the group consisting of [SEQ ID NO: 52 through SEQ ID NO: 102 and] SEQ ID NO: 155 through

a3
cont. SEQ ID NO: 206.

Q4 32. (Amended) A genotype-specific peptide having amino acid sequences deduced from a genotype-specific amino acid domains located in [SEQ ID NO: 52 through SEQ ID NO: 102 in] SEQ ID NO: 155 through SEQ ID NO: 206, or in consensus sequences shown in Figures [2A-H and] 7A-K.

Q5 38. (Amended) A universal peptide having amino acid sequences deduced from universally conserved amino acid domains found [in SEQ ID NO: 52 through SEQ ID NO: 102,] in SEQ ID NO: 155 through SEQ ID NO: 206, or in consensus sequences shown in Figures [2A-H and] 7A-K.

47. (Amended) A composition comprising at least one expression vector capable of directing host organism synthesis of a genotype-specific peptide having an amino acid sequence deduced from a genotype-specific amino acid domain located in [SEQ ID NO: 52 – SEQ ID NO: 102, and] SEQ ID NO: 155 – SEQ ID NO: 206, or in consensus sequences shown in figures [2A-H and] 7A-K.

Q6 48. (Amended) A composition comprising at least one expression vector capable of directing host organism synthesis of a universal peptide having an amino acid sequence deduced from universally conserved amino acid domains found in [SEQ ID NO: 52 – SEQ ID NO: 102, and] SEQ ID NO: 155 – SEQ ID NO: 206, or in consensus sequences shown in figures [2A-H and] 7A-K.